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ABSTRACT

The status of students at risk of failure in public high schools in the Commonwealth of the Northern Mariana Islands (CNMI) was studied during the 1993-94 school year as part of a larger study of at-risk students in some of the American-affiliated Pacific political entities. In the CNMI, data were collected from 57 student records, and interviews with 27 at-risk students, 29 not at-risk students, 58 teachers, 3 principals, and 7 community leaders. Because of the small sample size in the CNMI, many variables expected to play a role in at-risk status could not be analyzed statistically. However, variables that appeared to be related to students' at-risk status based on response frequencies included: (1) previous academic performance; (2) time spent doing homework; (3) behavioral problems in school; (4) language spoken in the home; (5) absenteeism; (6) alcohol and substance abuse; (7) witnessing an accident (perhaps an indication of environment); and (8) teachers' years of experience. Both academic and personal aspects of schooling were found to be related to the at-risk status of high school students in the CNMI; and recommendations for improvement focus on cooperation between school, home, and community to demonstrate the value of education, improve the quality of instruction, increase parent involvement, and resolve absenteeism and improve recordkeeping. (Contains 18 tables.) (SLD)

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A Study of Risk Factors Among High School Students in the Commonwealth of the Northern Mariana Islands

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October 1995

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Preface

This report represents, not an end-product resulting from a simple research project, but a significant milestone in an ongoing process. The development of the PREL R&D Cadre as an integrated data collection and analysis group for the region and each entity is a result of this process and a force for research in the future. As part of this investigation, a vast amount of data was collected to study risk factors affecting high school students in the region (see the appendices). The data obtained were beyond the scope of this report. As such, it was not possible to analyze all the data. Therefore, contents of this report should be viewed only as a preliminary investigation of risk factors.

The report's primary intent is to provide a base that Cadre members can use to present preliminary study results to their colleagues and communities throughout the region. Feedback from these presentations will assist the R&D Cadre and PREL in structuring future research into the important characteristics of risk.

PREL intends to maintain the at-risk data base for future analyses and development. Future analyses may address in-depth considerations of alternative definitions of risk, multiple correlation of risk factor analysis, and interviews with former respondents concerning their interpretation of the results.

Executive Summary

Purposes of the Study

Purposes of the study are to:

- Provide a profile of variables related to the status of students at-risk of failure in public high schools in Commonwealth of the Northern Mariana Islands.
- Provide opportunities for collaborative research among the entities' departments of education.

Methodology

Representatives from each of the 10 American-affiliated Pacific entities planned and conducted the study. Data were collected from public high schools in the 10 entities served by PREL: American Samoa, Federated States of Micronesia (Chuuk, Kosrae, Pohnpei, and Yap), Guam, Hawai'i, Republic of the Marshall Islands, CNMI, and Republic of Palau. Data were collected during the Spring semester of the 1993-94 school year. This report presents a subset of the regional study, specifically CNMI.

The following definition of at-risk students was utilized in this study:

> "An at-risk student is one who is in danger of failing to complete his or her education with adequate academic skills, knowledge, and attitudes to function as a responsible citizen of his or her community."

Students who failed one or more courses in the fall semester of the 1993-94 school year and were in grades 9-12 of a public high school in CNMI were identified as at risk and selected for the study.

Results in CNMI

Because of the small sample size in CNMI, many of the variables could not be analyzed through statistical methods. However, variables that appear to be related to students' at-risk status based on response frequencies are discussed in the report. Among these variables were: previous academic performance, time spent doing homework, behavioral problems in school, language spoken in the home, absenteeism, alcohol and substance abuse, witnessing an accident, and years of teaching experience.

In general, both academic and personal aspects of schooling were found to be related to the at-riskness of high school students in CNMI.

Conclusions/Recommendations

To address critical issues of high school students at risk in CNMI, schools, parents, and communities must collaborate to provide a variety of counseling services to students and their families. They must work together to demonstrate the value of education, and the benefits of strong study habits and school learning. Improving the quality of instruction through staff development, and increasing parent involvement in the educational process should also be a priority. In addition, schools must work to resolve absenteeism and improve school record keeping systems in order to provide students with a comprehensive and effective educational program.

I. Introduction

An increased concern for at-risk youth is evident throughout the Pacific region. The Pacific Region Educational Laboratory (PREL) Study of Risk Factors among High School Students in the Pacific region, with entity-level studies in Chuuk and Kosrae states, American Samoa, and Commonwealth of the Northern Mariana Islands (CNMI) is designed to identify the factors that affect at-risk high school students in the Pacific, promote an awareness and understanding of these students, and offer approaches to improving their education.

PREL serves 10 Pacific region entities—American Samoa; Commonwealth of the Northern Mariana Islands; the Federated States of Micronesia, comprised of the states of Chuuk, Kosrae, Pohnpei, and Yap; Guam; Hawai'i; the Republic of the Marshall Islands; and the Republic of Palau. These entities are diverse in their student population in terms of demographic variables including ethnicity, language, migration, and gender. The school systems serving these students vary in their abilities to accommodate all of the high school age population, maintain accurate student records, provide certified teachers, provide extensive course offerings, and promote opportunities for community and parent involvement. The composition of homes and families ranges from extended families to single parent households. Community expectations of appropriate roles for students, teachers, and parents vary with cultural contexts.

The Commonwealth of the Northern Mariana Islands forms a chain of 17 volcanic islands, stretching over 375 miles north to south, with a land area of 181 square miles. There are six inhabited islands, but most of the CNMI's 78,753 people (est. 1995) live on Saipan. The CNMI was formerly a part of the Trust Territory of the Pacific Islands; however, its people chose in the 1970s to form closer ties with the United States and become a commonwealth. The CNMI is permanently a part of the United States, and its people are U.S. citizens. Tourism is a major industry and manufacturing is growing rapidly. The median age is 27.4. The median income is $21,275. There are 10 public schools on three islands with a total of 7,710 students and 415 teachers in the CNMI (1994).

Because the region is so diverse, a simple study of a limited number of variables was deemed impractical. Therefore, an extensive study of variables related to student success and failure in the public high schools of the U.S. affiliated Pacific region was undertaken.

The study places a strong emphasis on looking at the child from a holistic point of view. The researchers are well aware that an individual's success, especially in the Pacific region, is not measured by academic success alone, but also involves the many facets of personal development directly and indirectly related to the influence of formal and informal education, the surrounding environment and the milieu of the time. Therefore, it should be pointed out that, although a definition of a student at risk is provided for research purposes, this is not to be taken as a definition of a student at risk in all aspects of life. Nevertheless, because formal education is valued in the Pacific region, this definition of at-riskness surely plays a part in the experience of success or failure by the youths in the region. Keeping this in mind, this study was undertaken to identify factors comprising the profile of a child who needs extra help and attention from parents, educators, and administrators to reach his or her fullest potential as a contributing member of society.

The study was conducted over a period of three years by the PREL Research & Development (R&D) Cadre, which is composed of one representative from each of the 10 entities' departments of education, two representatives of postsecondary institutions in the region, one private school representative, and a representative from the national government of the Federated States of Micronesia (FSM). Local support was provided during data collection by the local R&D support group, numerous school

counselors, central office staff, principals, teachers and educational administrators.

This report provides a review of the literature, lists research questions, describes the methods used in conducting the study, presents the framework for analysis and results for CNMI, and discusses recommendations. Suggested uses of the report, ideas for further research, references, and appendices of the instruments used in the study are included in the regional report. The regional report is available from the Pacific Region Educational Laboratory, 828 Fort Street Mall, Suite 500, Honolulu, Hawai'i, 96813.

II. Review of the Literature

The R&D Cadre reviewed the literature to: (1) define at-riskness, and (2) identify in other studies variables that are related to students' at-risk status.

As elsewhere, some students in the Pacific region are not experiencing success in school. The National Goals for Education (1990) say, in part, "Educators must be given greater flexibility to devise challenging and inspiring strategies to serve the needs of a diverse body of students. This is especially important for students who are at risk of academic failure—for the failure of these students will become the failure of our nation." This goal is consistent with the belief that schools can make a difference. The need for new strategies is also consistent with the primary reasons cited by dropouts in 1992 for leaving school: not liking school, failing school, and feeling unable to keep up with schoolwork (Gronlund, 1993).

Definition of At-Risk Students

In conducting the review of the research, the first step was to develop an understanding of the term "at-risk students." For purposes of this study, the term "at risk" was viewed as a descriptive term referring to the total educational context in which students operate, rather than a negative reflection of the students.

A great deal of information about "at-risk" students is present in the educational literature, beginning with the traditional approach of studying student dropouts (Wehlage & Rutter, 1986; Castello & Young, 1988; Natriello, Pallas, & McDill, 1986) and alienated youth (Pellicano, 1987) and moving toward the more recent emphasis on changes in policy and practice that enhance students' chances to succeed (Hendrick, MacMillan, Balow, & Hough 1989). The earlier emphasis was on studying the correlates to dropouts—to focus on social decay as both the cause of alienation and the barrier preventing school success in dealing with the dropout. Institutions may rationalize the plight of dropouts in this way: it is not the school's fault that some students come from poor homes and community environments and lack the motivation and academic talent to succeed; the schools are unable to solve these socioeconomic determinants and are, therefore, not responsible for the fact that a sizable portion of their clients find good reasons to leave school before graduation.

Presseisen (1988) described the term "at risk" as originating from a medical model in which it was used as part of the phrase "at risk of something." An example is a student at risk of dropping out of school. Another definition of a student "at risk" is one who is "in danger of failing to complete his/her education with an adequate level of skills" (Slavin & Madden, 1989). The term implies that there is a threatening condition surrounding these students, and that the condition is not necessarily inherent in the students. This perspective allows for interventions to reduce some of the threat, and thereby increase the students' chances of avoiding the condition. The author described groups often included in the "at-risk" category as ethnic minorities, male students, students of low socioeconomic status, and students suffering from various forms of stress or instability. Presseisen further indicated that these student groups seem to encompass a number of problems related to quality and appropriateness of

educational services, meaninglessness of instruction, family and community instability, and academic and school distinctions.

Richard A. McCann (1988) provided four descriptors of at-risk students, including characteristics of the individual, environmental conditions, students' ability to meet educational standards, and students' behaviors indicating their inability to assume responsible adult roles. These descriptors focus on negative behaviors and conditions. McCann asserts that the outcome of ignoring these negative variables will be a citizenry of unproductive society members.

After reading these and other authors, the R&D Cadre agreed to the following definition of at-risk students:

> "An at-risk student is one who is in danger of failing to complete his or her education with adequate academic skills, knowledge, and attitudes to function as a responsible citizen of his or her community."

For practical purposes of identifying and selecting students for this study, an at-risk student is identified as a student who failed one or more courses in the fall semester of the 1993-94 school year and was in grades 9-12 of a public high school in the Pacific region. This dependent variable was used in the selection of students for the study. A student's degree of at-riskness was related to the number of courses that student failed.

Variables Related to Students' At-Risk Status

Ekstrom, Goertz, Pollack, and Rock (1986) used the National Center for Education Statistics (NCES) High School and Beyond database to look at "Who drops out of high school and why?" They found that the two background factors most strongly related to dropping out of school are socioeconomic status (SES) and race/ethnicity. Black-Americans and Hispanics were the ethnic groups identified in this study as potential dropouts. Other factors included single-parent families, large families, and living in the South (USA) or in a large city. Academic failure was consistently related to dropping out, and students who dropped out have been shown to have experienced dissatisfaction with school and have lower self-esteem

In an earlier study, Rumberger (1983) identified factors leading to students' decisions to drop out of school. The purpose of the study was to see how family background relates to dropping out of school for students of different ethnic groups and gender. The results showed that students from low socioeconomic status (SES) were more likely to drop out than those of high SES. Young women were highly influenced by their mother's educational level and males by their father's level of education. At the time of the study, most females left school due to pregnancy and to marry, and males left school to go to work. Family background factors, including parents' level of education and the social status of the family, were found be powerful predictors of dropping out. The author speculates that students from families with low social status may have a greater tendency to leave school to help support their families. Therefore, family background was a significant factor in predicting dropping out of school.

Although these studies present a broad picture of factors related to at-risk youth, they may not address the specific population of the Pacific region. Many of the region's students would be considered ethnic minorities by U.S. Mainland standards, but are in the majority in their islands. When compared to U.S. standards, many would also be considered to be from lower income families. It should also be noted that the region's students are presently undergoing rapidly changing cultures. In an article relevant to the Pacific, Ainsley, Forman, and Sheret (1991) described a study of high school factors that influence students to remain in school in New South Wales, Australia. In addition to the effects of socioeconomic status, gender, and being non-English first language speakers, they identified two other factors that influence students to remain in school—student achievement level and student's perception of the quality of school life. This study also

recommended investigating other school-related factors such as curriculum innovations, school organization, student achievement, and students' attitude toward school.

In a study sponsored by the World Bank, Bruce Fuller investigated school factors that raise achievement in the Third World (1987). Fuller suggested that "school institutions exert a greater influence on achievement within developing countries compared to industrialized nations, after accounting for the effect of pupil background." His perspective for the review was to look at "how material ingredients are mobilized and organized within schools and classrooms." The school factors reviewed were school expenditures, specific material inputs, teacher quality, teaching practices, classroom organization, and school management. The two key issues raised were: (1) the greater influence of schools on student achievement in developing nations, and (2) how material inputs are "managed and what skills teachers draw upon to strengthen the social structure of the classroom."

For purposes of identifying factors for investigation in the R&D Cadre's study, the most informative work was Koki's study, "The Children and Youth At-Risk Effort in Hawai'i" (1987). Koki outlined academic, psychological, and social-behavioral indicators of at-risk students in Hawai'i. Hawai'i's at-risk students included those with limited English proficiency, underachievers, the intellectually limited, the economically disadvantaged, the malnourished, substance abusers, dropouts and potential dropouts, those retained for one or more years, pregnant teens or teens with children, those from unstable homes, the abused and neglected, the psychologically impaired, those who threaten or attempt suicide, juvenile delinquents, and the "silent ones" or withdrawn, alienated youth. The study reviewed a number of intervention programs aimed at students with these characteristics.

The review of the literature led to the identification of factors to be investigated in the PREL at-risk study. To account for the differences inherent in these entities, and to identify factors most associated with at-riskness in public high school students, the Cadre focused on four broad domains: the student, home, school, and community. Selection of these domains arose from a model of student performance described by Alesia Montgomery and Robert Rossi (1993) who wrote, "A student's personal, home, community, and school characteristics should not be studied in isolation—all these variables contribute to student performance, and they are strongly interactive." This model encompasses the previously reviewed research from the U.S. mainland, Hawai'i, Australia, and developing nations.

The R&D Cadre adheres to the body of literature that is premised on the assumption that although non-school-based factors contribute to the school success of students, schools can make a difference. Hendrick, MacMillan, Balow, and Hough (1989) provided a summary statement of this position. "Even though one cannot pinpoint the best intervention for a particular group of students, there are a number of general school strategies that have been shown to be successful in retaining students. Indeed, one characteristic of the literature on intervention strategies is that almost everything seems to work when enthusiastic and engaged principals and teachers become committed to a specific course of action."

The Cadre felt that research on at-risk factors identified for youth in American inner-cities, may not be relevant to Pacific communities. As a result, this study sought to identify and research variables related to student success and failure which are specific to the public high schools of the U.S. affiliated Pacific region. Through this study and the R&D Cadre's identification of the factors that place Pacific public high school students at risk, Pacific communities may unite and focus on reshaping roles and partnerships between schools, homes, and communities to provide enduring systemic change to better serve all students.

III. Research Questions

The primary research question to be addressed was:

What are the variables within the schools, homes, and communities that relate to students failing in the public schools of the Pacific region?

A related question to be considered was: *What areas should be targeted to better serve at-risk students in these schools?*

IV. Methodology

This regional research could not have been accomplished without the PREL R&D Cadre. This Cadre of 14 Pacific educators worked in collaboration with PREL staff to design the study, coordinate and implement plans at the local level, and participate in the analysis and completion of the final report. Each Cadre member was assisted in his/her own jurisdiction by a local R&D Support Group of teachers, counselors, principals, central office staff, and education administrators. Five PREL staff were assigned to collaborate on this effort.

The design work for this study was initiated in January 1993 at the PREL R&D Cadre Seminar, during which a plan of work and data collection instruments were drafted. From February to April 1993, the instruments were piloted in all entities during PREL staff site visits. In May through June 1993, PREL staff finalized the data collection instruments. From July through August 1993, PREL staff met with R&D Cadre members either on site or over PEACESAT teleconferences to get feedback and finalize procedures for collecting data. In September 1993, data collection was initiated by setting up sampling procedures in each entity and plans were finalized for data collection. On-site training on data collection procedures was conducted during the fall semester in all entities. These sessions were held to provide local R&D Support Group members in each entity with consistent training. Data collection began in January 1994 with student selection based on the Cadre's at-risk definition and student's academic performance in the previous semester. On-site support was provided by PREL during the spring semester to initiate data collection and to review and validate the data before submission of the data set. Data sets were submitted for data entry at a seminar in Honolulu in June 1994. Data were aggregated and entered into six databases. The R&D Cadre met in October 1994 to review preliminary analysis and to begin drafting the report. PREL staff continued the work with statistical analysis support. The R&D Cadre members were consulted throughout final report development.

Six instruments were developed for data collection. The first instrument was designed to gather data from students' school records, and included information on grades, absenteeism, length of enrollment in the school, discipline, attitude, and behavior. A second instrument, a student interview protocol, was designed to gather demographic information as well as students' perspectives on the quality of instructional services and school climate at their school. A third instrument was designed for parent interviews to gather information regarding the family configuration, expectations for the student, and relationships with the school. A fourth instrument, a teacher interview protocol, focused on the teachers' credentials and their opinions about the students targeted for the study. The fifth and sixth instruments were interview protocols for principals regarding school variables and their perceptions of the at-risk issue and for community leaders regarding the social context of the students' daily lives outside of school.

In CNMI, data were collected from 57 stu-

dent records, 56 students, 47 families, 58 teachers, 3 school principals, and 7 community leaders. At-risk and not at-risk students were randomly selected at each grade level from CNMI public high schools. The data set included 27 at-risk students and 29 not at-risk students.

Table 1. Number of Respondents for each Instrument in CNMI

Entity	Records	Student Interview	Parent Interview	Teacher Interview	Principal Interview	Community
CNMI	57	56	47	58	3	7

V. Framework for Analysis

The review of the literature suggested areas of analysis for this study. The analyses were grouped according to the four contexts identified in the design of the study; the student, the home, the school, and the community. Table 2 shows the placement of student, home, and school variables analyzed within this conceptual scheme.

The student was the unit of analysis in the study. Regional data were analyzed using chi-square analysis. Whenever an independent variable could be measured in ordinal or interval scale, analysis of variance was used. In CNMI, because of the small sample size, many of the variables could not be analyzed through these statistical methods. Therefore, response frequencies for each variable were analyzed for trends indicating relationships with the at-risk status of students. Variables that appear to be educationally significant are discussed in the report.

Table 2. List of Students, Home and School Variables

Contexts	Variables	Description of Variable
Student	1. Gender	Male/Female
	2. Language	Language spoken in the home
	3. Ethnicity	22 ethnic groups represented in the region
	4. "Foreignness"	Constructed variable including student's citizenship, ethnicity, length of stay in current residence, majority /minority ethnic group in schc
	5. Previous academic performance	Number of courses failed in previous three semesters
	6. Homework	Time spent doing homework
	7. School attitude problems	As reported in school records
	8. Disciplined for attitude problems	Referred to the school office
	9. Behavior problems	As reported in school records
	10. Disciplined for behavior problems	Referred to the school office
	11. Absenteeism	As reported in school records
	12. Disciplined for attendance problems	Referred to the school office
	13. Comments about school made at home	Does student talk about school while at home?
	14. Emotional abuse/ neglect	Self-report of abuse, neglect and traumatic experiences
	15. Abuse of family member	Did student witness abuse of family member?
	16. Witness an accident	Did student witness an accident?
	17. Alcohol abuse	Self-report of alcohol abuse
	18. Substance abuse	Self-report of substance abuse
Home	19. Socioeconomic status	Household income computed according to entity average and including subsistence income
	20. Family configuration	Number of people in the household
	21. Quality of relationship with family	Self-report by parent about quality of relationship with student
	22. Family responsibilities	Family responsibilities which cause school absences
School	23. After school tutoring services	Do students receive school tutoring services?
	24. Language of instruction	Reported by teachers
	25. Class size	Ratio of students to teacher
	26. Teaching experience	Years of teaching experience
	27. Teachers who request training in at-risk teaching strategies	From teacher questionnaire
	28. Teachers who request more	From teacher questionnaire

VI. Results

Variables found to be educationally significant for CNMI, based on response frequencies, are discussed in relation to the statistical results for the region.

As shown in Table 3, 15 of the 18 variables associated with the student context were significantly associated with at-risk students region-wide. Results in CNMI were not consistent with these results, however, as only 9 of the 18 variables appeared to be related to the at-risk status of students.

Table 3. Results for Student Variables in the Region and in CNMI

Student Variables	Statistically Related to At-Riskness in the Region	ResponseFrequencies Indicate a Relationship in CNMI
1. Gender	No	No
2. Language	No	Yes
3. Ethnicity	No	No
4. "Foreignness"	Yes	No
5. Previous Academic Performance	Yes	Yes
6. Homework (amount of time spent)	Yes	Yes
7. School attitude problems	Yes	No
8. Disciplined for School attitude problems	Yes	No
9. Behavioral problems	Yes	Yes
10. Disciplined for Behavior problems in school	Yes	Yes
11. Absenteeism	Yes	No
12. Disciplined for attendance problems	Yes	Yes
13. Comments about school made at home	Yes	No
14. Emotional Abuse/Neglect	Yes	No
15. Abuse of Family member	Yes	No
16. Witness an accident	Yes	Yes
17. Alcohol	Yes	Yes
18. Substance Abuse	**	Yes

** = Small cell sizes preclude statistical testing.

Variables found to be statistically significant in the review of the National literature, but not in the regional study, were gender, language and ethnicity. In other words, although students were selected at random, gender was not significantly associated with at-risk status as defined in this study. Language also was not a significant variable, perhaps because the language of the home also was the primary language of the community at large, unlike the U.S. mainland context with English speaking majority in communities where the research was conducted. A sim-

ilar explanation may be made of the lack of significance for ethnicity.

While similar findings were obtained in CNMI for both gender and ethnicity, there appeared to be a relationship between language spoken in the home and a student's at-risk status. That is, more not at-risk students speak English or both Chamorro and English at home than their at-risk peers. In fact, no at-risk students reported speaking English exclusively at home. The response frequencies are presented in Table 3A.

Table 3A. Frequency Table for Student Variables 1-3

Student Variables	At Risk	Not At Risk
1. Gender	Female=11 Male=13 Total=24	Female=16 Male=12 Total=28
2. Language spoken at home (Native = Chamorro)	Native=10 English=0 Both=11 Total=22	Native=5 English=4 Both=17 Total=26
3. Ethnicity Ethnic minority in school (yes or no)	Yes=6 No=18 Total=24	Yes=9 No=17 Total=26

Because an analysis of the ethnicity variable did not yield significant results, it was decided that, in view of immigration patterns in the region, a construct called "foreignness" should be investigated. Student "foreignness" was measured by citizenship, ethnicity, and whether the student had lived in the entity of current residence since birth, and the student's status as an ethnic minority or majority in school.

The relationship between "foreignness" and at-riskness was significant in the region, and showed that the "more foreign" a student, the less likely the student was to be at risk. There are several possible explanations for this finding. Moving to a new home may entail the search for a better life and, therefore, greater motivation to excel in school as a means of reaching success in the new location. Immigrants may also have different cultural values regarding education or different prior schooling experiences.

In CNMI however, the construct called "foreignness" did not have any relationship with students at risk. As Table 3B indicates, there was little data available for this variable; however, all of the at-risk and not at-risk students are characterized as "least foreign" on the scale.

Table 3B. Frequency Table for Student Variable 4

Student Variables	At Risk	Not At Risk
4. "Foreignness"	One=7 Two=0 Three=0 Four=0	One=6 Two=0 Three=0 Four=0
One=least foreign and Five=most foreign	Five=0 Total=7	Five=0 Total=6

National research has established that a student's previous academic performance is a highly significant predictor of at-risk status. This also appeared to be true in CNMI where, as Table 3C indicates, at-risk students failed a higher number of courses than not at-risk students.

Table 3C. Frequency Table for Student Variable 5

Student Variables	At Risk	Not At Risk
5. Previous Academic Performance (Number of courses failed in previous three semesters)	Zero=20 One=7 Two=2 Three=0 Four=2 Five=0 Total=31	Zero =24 One =4 Two =1 Three=3 Four=0 Five=0 Total=32

Another regional finding consistent with National research was that student perceptions about school, as indicated by time spent doing homework, attitude and behavioral problems in school, and student absenteeism were significantly related to the at-risk status of students. The length of time spent doing homework was related to at-risk status and was used as an indication of a student's perception of the importance of the work and willingness to commit time to the assignments. Disciplinary action for attendance problems in the past, as shown in the school records, also was significantly associated with at-risk status. In addition, at-risk students had more reports of attitude and behavioral problems and instances of being disciplined for these problems at school.

The results for CNMI were somewhat consistent with the findings in the region. Time spent doing homework was found to be related to at-riskness. As indicated in Table 3D, twice as many not at-risk students reported "always" doing their homework than at-risk students.

Table 3D. Frequency Table for Student Variable 6

Student Variables	At Risk	Not At Risk
6. Homework (How often student does homework)	one=6	one=13
1=always; 2=sometimes; 3=never	two=18	two=16
	three=0	three=0
	Total=24	Total=29

School attitude problem variables did not appear to be strongly related to students' at-risk status in CNMI, although there was a trend toward at-risk students having more attitude problems. Behavioral problems appeared to be associated with at-risk status, however, with twice as many at-risk students with recorded behavioral problems than their not at-risk peers, and three times as many referred to the office for behavioral problems. The discrepancy between variables 9 and 10 may be attributed to record keeping inaccuracies, or school policies on disciplinary action. Table 3E provides the response frequencies for these variables.

Table 3E. Frequency Table for Student Variables 7-10

Student Variables	At Risk	Not At Risk
7. School attitude problems (according to school records)	Yes=6	Yes=3
	No=25	No=29
	Total=31	Total=32
8. Disciplined for School attitude problems	Yes=7	Yes=3
(referred to the office)	No=24	No=29
	Total=31	Total=32
9. Behavioral problems (according to school records)	Yes=10	Yes=5
	No=21	No=27
	Total=31	Total=32
10. Disciplined for Behavioral problems in school	Yes=15	Yes=5
(referred to the office)	No=16	No=27
	Total=31	Total=32

Absenteeism, as indicated in school records, does not appear to be strongly related to student at-risk status in CNMI. However, a clear relationship exists for referral to the office for attendance problems. As with the behavior problem variables, the records in CNMI seem to indicate that while office referrals for the problem occur, the problem is not always noted in school records. Attendance data are presented in Table 3F.

Table 3F. Frequency Table for Student Variables 11, 12

Student Variables	At Risk	Not At Risk
11. Absenteeism (school records indicate an attendance problem)	Yes=12 No=19 Total=31	Yes=7 No=25 Total=32
12. Disciplined for attendance problems (referred to the office for attendance problem)	Yes=12 No=19 Total=31	Yes=4 No=28 Total=32

Another group of student variables investigated focused on the student's home and family. Larger numbers of not at-risk students in the region made comments about school at home to their parents compared to at-risk students. This analysis did not focus on the type of comments (positive or negative). More not at-risk students simply talk about school when they are at home.

However, as indicated in Table 3G, similar numbers of at-risk and not at-risk students in CNMI made comments about school at home.

Table 3G. Frequency Table for Student Variable 13

Student Variables	At Risk	Not At Risk
13. Comments about school made at home	Yes=12 No=11 Total=23	Yes=10 No=12 Total=22

Personal problems and emotional stress were also found to be significantly related to the at-risk status of a student in the region, as in studies conducted elsewhere. Significantly larger numbers of at-risk students experienced emotional abuse and neglect and lived with physical abuse by a close relative. They also had witnessed more accidents and reported significantly more instances of alcohol and substance abuse than their not at-risk peers.

In contrast, in CNMI, the only variables consistent with regional findings were the larger numbers of at-risk students who reported witnessing an accident and abuse of alcohol and other substances. Table 3H provides frequency data for these variables.

Table 3H. Frequency Table for Student Variables 14-18

Student Variables	At Risk	Not At Risk
14. Emotional abuse/neglect	Yes=6 No=23 Total=29	Yes=5 No=25 Total=30
15. Abuse of family member	Yes=2 No=27 Total=29	Yes=2 No=28 Total=30
16. Witness an accident	Yes=9 No=20 Total=29	Yes=4 No=26 Total=30
17. Alcohol (experienced alcohol abuse)	Yes=10 No=19 Total=29	Yes=2 No=28 Total=30
18. Substance abuse	Yes=6 No=21 Total=27	Yes=1 No=28 Total=29

The second set of analyses focused on data from the home context. Table 4 shows results obtained for the variables associated with the home context in the region and in CNMI. Except for the socioeconomic status variable, the results for CNMI were inconsistent with regional findings.

Table 4. Results for Home Variables in the Region and in CNMI

Home Variables	Statistically Related to At-Riskness in the Region	Response Frequencies Indicate a Relationship in CNMI
19. Socioeconomic status	No	No
20. Family configuration	Yes	No
21. Quality of relationship with family	**	No
22. Family responsibilities	Yes	No

** = Small cell sizes preclude statistical testing.

Because of economic diversity among entities, socioeconomic status was investigated two different ways: cash income in a household and a combination of cash and subsistence income. Both of these income measures were equated across all entities using criteria agreed upon by

the R&D Cadre regarding average income in each of the entities. Both analyses showed that family income as an indicator of a student's socioeconomic status was not related to at-risk status in the region or in CNMI.

Family configuration in the region was significantly related to at-riskness. More at-risk students live in large households of 10 or more, while their not at-risk counterparts live in smaller family units. In CNMI however, household size did not seem to be related with a student's at-risk status. As Table 4A indicates, the majority of both at-risk and not at-risk students in CNMI come from large families of 6-10 people.

Table 4A. Frequency Table for Home Variables 19, 20

Home Variables	At Risk	Not At Risk
19. Socioeconomic status	Very high=0 High=5 Average=9 Low=8 Very low=4 Total=26	Very high=0 High=1 Average=15 Low=8 Very low=7 Total=31
20. Family configuration (number of people living in the household) 1-5 people=One 6-10 people=Two over 10 people=Three	One=3 Two=17 Three=4 Total=24	One=5 Two=22 Three=1 Total=28

Family problems were analyzed using the reported quality of the relationship between parents and the student. Poor quality of relationship with parents was associated with at-risk students in the region but not in CNMI. In addition, significantly more at-risk students in the region had family responsibilities which caused them to be absent from school. This was not the case in CNMI where, as reported in Table 4B, few students reported missing school because of family obligations.

Table 4B. Frequency Table for Home Variables 21, 22

Home Variables	At Risk	Not At Risk
21. Quality of relationship with family	Good=23 Fair=1 Total=24	Good=24 Fair=3 Total=27
22. Family responsibilities which cause absence from school	Yes=7 No=17 Total=24	Yes=3 No=25 Total=28

The third set of analyses focused on data from the school context. Table 5 shows the results obtained for school variables in the region and in CNMI. Except for the variables for class size and teachers who request materials, the results for CNMI were consistent with regional findings.

Table 5. Results for School Variables in the Region and in CNMI

School Variables	Statistically Related toAt-Riskness in the Region	Response Frequencies Indicate a Relationship in CNMI
23. After school Tutoring Services	No	No
24. Language of Instruction	No	No
25. Class size (student teacher ratio)	Yes	No
26. Teaching Experience	Yes	Yes
27. Teachers who request training in at-risk teaching strategies	Yes	No
28. Teachers who request more instructional materials	Yes	No

School tutoring services and the language of instruction were not associated with at-riskness in the region or in CNMI. Table 5A provides details on response frequencies from CNMI.

Table 5A. Frequency Table for School Variables 23, 24

School Variables	At Risk	Not At Risk
23. After school tutoring services	Yes=18 No=3 Total=21	Yes=20 No=5 Total=25
24. Language of instruction	English=26 Native=2 Total=28	English=25 Native=3 Total=28

Class size and teachers' years of teaching experience were significantly related to at-riskness in the region. Results indicated that lower student/teacher ratios are actually associated with at-risk students, with relatively more at-risk students in smaller classes. These results may be attributed to grouping practices for at-risk students such as pull-out programs and remediation or special education classes. However, there are more of both at-risk and not at-risk students in larger classes. Teachers' years of teaching experience yielded more predictable results. More at-risk students were enrolled in classes taught by teachers with less than 15 years experience.

In CNMI, there was a relatively even distribution of at-risk students for each class size. However, as the responses in Table 5B indicate, more at-risk students receive instruction from teachers with less than 15 years of experience.

Table 5B. Frequency Table for School Variables 25, 26

School Variables	At Risk	Not At Risk
25. Class size or Student-Teacher Ratio	One=6	One=4
1-10=One	Two=11	Two=7
11-15=Two	Three=2	Three=8
16-20=Three	Four=8	Four=8
21-30=Four	Five=1	Five=1
31 or over=Five	Total=28	Total=28
26. Teacher's years of experience	One=12	One=20
	Two=15	Two=8
1-15 years=One		
Over 16 years=Two	Total=27	Total=28

Also related to students' at-risk status in the region was the number of teachers of at-risk students who responded that their effectiveness at teaching these students would be improved if they had access to more instructional materials and more staff development opportunities. The data from CNMI, however, did not appear to yield any particular relationship for teachers who requested training or instructional materials. Table 5C illustrates the similarity in responses for teachers of both at-risk and not at-risk students.

Table 5C. Frequency Table for School Variables 27, 28

School Variables	At Risk	Not At Risk
27. Do teachers request training in at-risk teaching strategies?	Yes=15	Yes=11
	No=13	No=17
	Total=28	Total=28
28. Do teachers request more instructional materials?	Yes=20	Yes=18
	No=8	No=10
	Total=28	Total=28

The fourth set of analyses focused on data describing the community context. The following results show a qualitative content analysis of open-ended questions asked of all teachers, parents, and at-risk and not at-risk students in CNMI regarding their perceptions of variables contributing to success and failure in school. Responses reported in this report were provided by a clear majority of respondents and are listed from most to least frequent. Various other responses were tallied, but were much less common than those reported here.

Students

When asked what causes them to do poorly in school, students in CNMI said:

- Other commitments, personal or family problems.
- Friends who are distracting or a negative influence.

- Not paying attention, fooling around in class.
- Poor study habits, being unprepared, not doing homework.
- Poor instruction and uninteresting curriculum.
- Fatigue.
- Difficulty understanding content.
- Poor attendance.

When asked what would help them do better in school, students said:

- Applying more effort to school and homework—studying harder.
- More interesting curriculum, better teachers, and availability of tutors.
- Paying attention, participating, and following instructions in class.
- Avoiding friends who are a bad influence.
- Improved family or personal situations.
- Improved attendance and time management.

Students described the best teachers as those who:

- Develop positive teacher-student relationship and respect students.
- Are competent, make learning fun and deliver clear and interesting instruction.
- Are patient and willing to offer extra help.

Students described the worst teachers as those who:

- Are strict, critical, mean, disrespectful, show favoritism, shout at or embarrass students.
- Are unprepared and unable to explain the lessons clearly.
- Are unfair or inconsistent in their expectations or grading practices.
- Are not willing to help students.

Parents

Parents said the causes of student success in school performance are:

- Good effort, study habits, and attitude.
- Family and teacher support.
- Good attendance by the student.
- Good teaching and learning environment.

Parents said the causes of students' difficulties in school are due to:

- Spending too much time with friends, distracted by bad influences.
- Laziness, poor study habits.
- Poor attendance.

When parents were asked what will help students to succeed in school, they said:

- Applying more effort to their school work.
- Support, guidance, and encouragement from family and school staff.
- Improved student attendance.
- Improved school environment, teaching, and tutoring.
- Understanding the value of education for the future.

Teachers

Teachers said that causes of student success are:

- High motivation, good attitude.
- Good attendance and participation.
- Good study habits, hard work.
- High level skills.
- Family support.

Teachers said that causes of student failure are:

- Poor attendance and participation.
- Low motivation, laziness, and poor attitude.
- No parental support or family problems.
- Poor study habits, little homework or class work.
- Low level English or basic skills.

The data were consistent in pointing to student effort and motivation as a primary variable

in student success. School performance difficulties were attributed to low motivation, poor study habits, and interpersonal or family problems. Students favored teachers who develop positive student-teacher relationships and cited better study habits and increased help from teachers or tutors as areas that would help them succeed. Another finding focuses on the need for increased communication, support, and guidance for the students from the school and the home. The negative influence of friends was reported by both students and parents. A majority of the findings suggest that personal or behavioral problems have a strong impact on students' at-risk status.

These results indicate the critical need to give attention to the affective and academic components of the curriculum. Habits and attitudes in learning are as important as skill and knowledge development. The home, school, and community each play an integral role in conveying positive messages about school, as well as providing the support the student needs to succeed.

Summary of Results for CNMI

The overall results of the study indicate that a large number of student, home, and school characteristics seem to be related to the at-risk status of students in CNMI. Student variables with cell sizes too small to be analyzed through statistical methods, but appeared to be related to students' at-risk status were:

- Language spoken in the home.
- Previous academic performance.
- Time spent doing homework.
- Behavioral problems in school.
- Absenteeism.
- Witness an accident.
- Substance abuse.
- Alcohol abuse.

School variables that appeared to be related to students' at-risk status were:

- Years of teaching experience.

In the data collection phase, the difficulty in accessing cumulative records for all students was noted throughout the region. An analysis of open-ended questions asked of students, parents, and teachers point to the need to address issues of affective as well as academic issues of schooling, low student motivation, the quality of instruction, and the critical role of the interactions between students, teachers, parents, and the community.

The results of this study support some of the general findings of the research conducted elsewhere. Unique to the Pacific region may be some of the cultural and family characteristics that blend the family unit with the community, increasing the influence of the quality of family and community life on education. In addition, gender, ethnicity, language, and socioeconomic status were not found to be significantly related to at-riskness region-wide. These variables were investigated in research on the U.S. mainland with different definitions of gender role expectations, ethnic minorities, languages other than English in English-speaking settings, and SES in a commercial, cash-dependent economy. In the Pacific, these variables, which would define minority status in other contexts, do not indicate the same reality for Pacific islanders. However, the variable for language spoken in the home in CNMI appeared to be related to students' at-risk status as it does in research conducted in English-speaking settings. It is therefore not surprising that teachers in CNMI point to proficiency in English as an important factor in student success.

VII. Recommendations

After analyzing the data, the R&D Cadre conducted a second review of the literature describing programs and initiatives related to issues of at-risk status in Pacific Schools. (A list of the studies and papers reviewed are provided in the regional report's appendix.) These articles were the basis of the Cadre's discussions and led to regional recommendations associated with student, home, and school variables.

Refer to the regional report for a full discussion of regional recommendations. The recommendations that are most pertinent to CNMI are:

Recommendations Regarding Findings on Student Variables

1. Offer academic, career, and college counseling, substance abuse prevention and counseling, and personal adjustment/life-skills support to all students. These services are critical as students, teachers, and parents in CNMI cited low motivation, poor attitudes, the negative influence of peers, and personal problems as causal factors in failure. Attitude and behavior problems at school and home and related problems, such as substance and alcohol abuse, also appeared to be related to at-risk status and should be addressed through counseling and support.
2. Schools, communities, and parents should work together to give consistent messages about the value of education and the value of students as contributing members of their community and family. Students understand that improved study habits and attendance are key factors in their school success; however, negative outside influences, and family problems are a constant challenge. The importance of family support cannot be overemphasized.
3. Address absenteeism by both students and teachers. Students, teachers, and parents all cited attendance as a key factor in both student success and failure, and there was a strong relationship between attendance and at-riskness.
4. Maintain and use student records to support students' learning and to provide a long-term view of students' academic, physical, emotional, or social experiences. Records can also be used to provide information about any awards or special recognition as well as needs for special support. The lack of these records creates a deficit of critical information that prevents the development of the most effective educational program for students who are experiencing difficulties at school as well as students who are already successful.

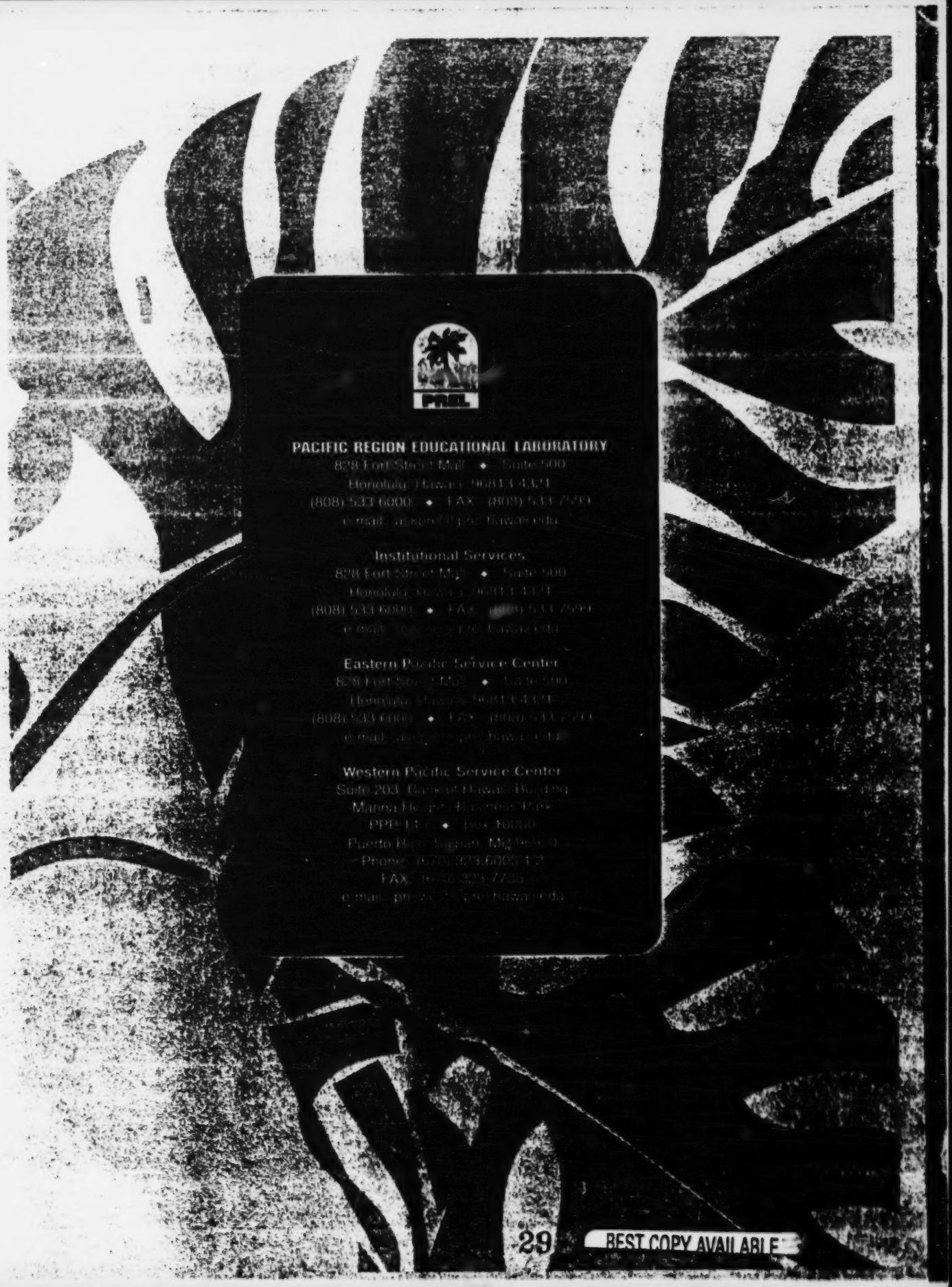
Recommendations Regarding Findings on School Variables

1. Acknowledge and increase teacher professionalism through staff development. Positive regard, caring, and commitment to the school and community must be modeled by teachers, administrators, parents, and community members in order for students to see the long-term value of their education and the role that education plays in Pacific island cultures and communities. Students must have the opportunity to work with teachers, administrators, and adults in the community who conduct themselves as role models.
2. Focus on improving the quality of instruction provided by schools and teachers, and make a commitment to improving conditions that promote learning. Demonstrate both the immediate and long-term benefits of education to students by making teaching and learning interesting, engaging, relevant, and effective. Students were enthusiastic about teachers who make learning fun

and are willing to offer additional lessons or support.

Recommendations Regarding Findings on Home Variables

1. Increase parent and family involvement. There is a need to influence and change the perception and attitude of students and parents that education is the school's responsibility alone. Support and outreach programs that involve families in the education of their children should be a focus for educational programming. School-family-community partnerships may be formed to address the critical areas identified by this research.
2. Families, educators, and communities must re-examine their roles and come together to view the learning and success of their students as a shared responsibility of the whole community. It has often been said, "It takes a whole village to raise a child." A student's self-esteem and motivation to learn do not begin and end at the door of the school. Community involvement will enhance student learning and enable students to begin defining their role as contributing citizens to the communities in which they live.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